CONCRETE TRIAL MIX DATA

Watershed _____ Subwatershed _____
Site No. _____ Structure _____ Class of concrete _____
By _____ Title _____ Date _____
W/C (strength) _____ gal/bag Use W/C (exposure) _____ gal/bag Use W/C _____ gal/bag
Slump range _____ in. Type of cement _____ Air content _____
Fineness modulus fine aggregate _____ Maximum size coarse aggregate _____

Materials	① Batch quantity (lb)	② Specific gravity[1]	③ Solid volume (ft^3)	④ Weight/bag of batch (lb)	⑤ Weight/ yd^3 (lb)	⑥ Remarks
Cement		3.15				
Water		1.00				
Fine aggregate (SSD)[2]						
Coarse aggregate (SSD)[2]						
Air	_____ oz		_____ Total solid volume of material			

Measured slump _____ in. Measured air _____ % Workability _____

Unit weight of concrete = $\frac{\text{Weight of concrete in container}}{\text{Volume of container}}$ = _____ = _____ lb/ft^3

Volume of batch = $\frac{\text{Total weight of batch}}{\text{Unit weight of concrete}}$ = _____ = $\frac{ft^3}{27\ ft^3/yd^3}$ = _____ yd^3

Volume of air = Volume of batch (ft^3) − Solid volume of ingredients = _____ − _____ = _____ ft^3

Air content = $\frac{\text{Volume of air } (ft^3)}{\text{Volume of batch } (ft^3)}$ X 100 = _____ X 100 = _____ %

Concrete yield = $\frac{\text{Volume of batch } (ft^3)}{\text{Number of cement bags}}$ = _____ = _____ ft^3/cement bag

Cement factor = $\frac{27\ ft^3/yd^3}{\text{Yield } (ft^3/bag)}$ = _____ = _____ bags/yd^3

Water = $\frac{\text{Water } (lb/yd^3)}{8.34\ lb/gal}$ = _____ = _____ gal/yd^3

Fine aggregate content = $\frac{\text{Weight of fine aggregate}}{\text{Total weight of aggregate}}$ X 100 = _____ X 100 = _____ %

Col. 1 − Weight of materials used in trial mixture

Col. 2 − Specific gravity of materials

Col. 3 − Absolute volume = $\frac{\text{weight}}{(\text{Sp. Gr.})(62.4)}$

Col. 4 − $\frac{(\text{Col. 1})(94)}{\text{Weight of cement used}}$

Col. 5 − (Col. 4)(cement factor), or $\frac{\text{Col. 1}}{\text{Volume batch } (yd^3)}$

[1] Specific gravity and absorption of coarse aggregates (from ASTM C-127). Specific gravity and absorption of fine aggregates (from ASTM C-128).

[2] Saturated surface dry.